



RESEARCH ARTICLE

AN EVALUATION OF RISK-RETURN AND RISK-ADJUSTED RETURN PERFORMANCE OF SELECTED LARGE-CAP MUTUAL FUNDS IN INDIA

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ABSTRACT

Capital market provides a variety of investment opportunity to the investors which help them to invest. Mutual fund ensures the minimum risks and maximum return to the investors among various financial alternatives. Consequently, close surveillance and evaluation of mutual funds has become crucial. For that reason, choosing profitable mutual funds for investment is a very important issue. This study is deals with the performance evaluation of selected large-cap mutual funds in India based on risk-return and risk-adjusted return performance measurements. To evaluate risk-return performance, return, Beta and Standard deviation have been considered. To evaluate risk-adjusted performance, widely used performance measure indexes like Sharpe's performance Index, Treynor's performance Index and Sortino's performance Index have been used. Period during five years of 2011-12 to 2015-16 has been considered. Total nine mutual funds have been taken for the study. From the analysis, it has been concluded that performance of selected large-cap mutual funds in India remains better in comparison than that of the category return.

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INTRODUCTION

A mutual fund is an investment company that creates a bridge between individual investors or retail investors and corporate giants. Mutual funds provide an investment options for retail investors or individual investors those who are not aware about stock market still they want to invest their funds in stock market with a small amount of money. A mutual fund is a pure intermediary which performs basic function of buying & selling security on behalf of its investors or unit holders. Mutual funds mobilize saving from a large number investors & invest these funds in share and other securities mutual funds are sine qua non for the development of the capital markets and the creation of the equity cult in an economy. According to Association of Mutual Funds in India (AMFI), Mutual fund is a trust that pools the money of the investors and invests it in the marketable securities on their behalf. Mutual funds are operated by fund managers, who invest the funds' capital in wide industries and sectors. So, the associated risk is reduced to minimum level. Mutual fund is issued to an individual based on the capital invested. Investors of mutual funds are demoted as unit holders.

Thus a Mutual Fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost. It is an ideal tool for people who want to invest but don't want to be think which stock is a good to buy or not.

Literature Review

Arugaslan and Ajay (2008) have examined the risk-adjusted performance of US-based international equity funds. They have found that the risk has great impact on the attractiveness of Funds. Higher return funds may lose attractiveness due to higher risk while the lower return funds may be attractive to investors due to the lower risk. Dietze, Oliver and Macro (2009) have studied on evaluation the risk-adjusted performance of European investment grade corporate bond mutual funds. They have found that the risk-adjusted performance of larger and older funds, and funds charging lower fees was higher. Goel Sweta *et al.* (2012) have concluded that that the past performance record is very useful in predicting the future performance of mutual fund. Investors must look at the past performance before investing in any fund and fund managers may track the best performing strategies by looking at the past performing record. Vasantha *et al.* (2013) have found that concluded that majority of the funds showed

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negative returns and no fund exhibited extraordinary performance. They have found that risk appetite of an investor plays an important role in the selection of mutual fund.

Statement of the Problem

It is very difficult task to select mutual fund scheme as there is a number of schemes available in the market. So, it becomes necessary to evaluate the performance of scheme in which investor wants to invest. There are various tools like co-variance, beta, standard deviation, correlation, co-efficient of variation to analysis performance and index like Sharpe's Performance Index, Treynor's performance index and Jensen's performance index to measure risk adjust return. On these bases, the research problem as well as question is framed as follows; what is the risk-return and risk-adjust return performance of selected large-cap mutual funds in India?

Importance of the study

The analysis and interpretation of this research present an idea about the performance and risk return for selected large-cap mutual funds in India. So it will be helpful to mutual funds investors as well as research agencies; mutual funds companies to select the scheme in light of risk-return as well as risk-adjust return.

Objective of the Study

- To evaluate the risk-return and risk-adjusted performance of selected large-cap mutual funds in India
- To give Rank to selected mutual funds scheme of mutual funds according to performance measure index
- To give useful suggestions to the investors in light of selected mutual funds.

Hypothesis of the Study

H01: Selected large-cap mutual funds in India do not perform well

H02: There is no significance difference in risk-adjusted returns performance of selected large-cap mutual funds in India

MATERIALS AND METHODS

Research design

The study is descriptive as well as analytical in nature. Comparison and analysis between different large-cap selected mutual funds have been carried out in this research.

Data collection

Secondary data has been collected through the official website of Mutual Fund India and National Stock Exchange of India Limited

Sample size

Nine mutual funds schemes from large-cap have been randomly considered for the studies which are as follows;

- Birla Sun Life Frontline Equity Fund
- Birla Sun Life Top 100 Div
- Franklin India Bluechip Growth
- HDFC Top 200
- ICICI Prudential Top 100 Growth
- ICICI Prudential Focused Bluechip Equity Growth
- L&T India Large Cap Fund
- Reliance Top 200 Growth

UTI Equity Growth

Time Period

Period during five years of 2011-12 to 2015-16 has been considered.

Tools and Techniques used:

To evaluate risk-return performance, return, Beta and Standard deviation are considered. To evaluate risk-adjusted Performance, widely used performance measure indexes like Sharpe's performance Index, Treynor's performance Index and Sortino's performance Index are used.

Scope of the Study

The present study comprises of nine mutual fund schemes. It covers large-cap mutual funds only. The time period of this research work is from 2011-12 to 2015-16. Then these schemes have been compared with the bench mark return to evaluate the performance of these schemes.

Data Analysis and Interpretation

Risk-Return Performance Analysis

Risk return performance is measured on the bases of the return mainly. Standard deviation is used to measure the variation in individual returns from the average expected return over a certain period. Standard Deviation is used in the concept of risk of a portfolio of investments; higher standard deviation means a greater fluctuation in expected return. Beta helps to measure the volatility of fund. It shows how prices of the securities respond to the market forces. It is calculated by relating the return on a security with the return for the market. Following Table 1.1 the results of return, standard deviation and beta.

Interpretation

The above Table no. 1.1 reveal that Birla Sun Life Top 100 Div fund has given the highest returns (11.65%) of all selected mutual funds. Whereas HDFC Top 200 fund has yielded lowest return (6.63%) in last five years. UTI Equity growth fund has earned the next highest returns (11.37%) followed by Birla Sun Life Frontline Equity Fund (11.15%), Reliance Top 200 Growths (10.28%), ICICI Prudential Focused Blue-chip Equity Growth (10.04%), ICICI Prudential Top 100 Growth (9.66%), Franklin India Bluechip Growth (8.80%), L&T India Large Cap Fund (8.43 %) and HDFC Top 200 (6.63%) among all funds. In comparison of category return, it can be said that all funds are having more return than category return (7.17%) except HDFC Top 200 fund with 6.63 %.

Table 1.1. Indicators of Risk-Return Performance

Fund → Parameters ↓	Birla Sun Life Frontline Equity Fund	Birla Sun Life Top 100 Div	Franklin India Bluechip Gr	HDFC Top 200	ICICI Prudential Top 100 Growth	ICICI Pru Focused Bluechip Eq Gr	L&T India Large Cap Fund	Reliance Top 200 Growths	UTI Equit y Gr
Funds Return %	11.15	11.65	8.80	6.63	9.66	10.04	8.43	10.28	11.37
Category Return %	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17	7.17
Funds S.D.	16.13	16.63	15.11	19.25	16.57	15.54	15.35	17.94	15.19
Category S.D.	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43
Funds Beta	0.95	0.98	0.88	1.12	0.96	0.91	0.89	1.03	0.88
Category Beta	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95

Table 1.2. Risk-Adjusted Return Performance Index

Fund → Index ↓	Birla Sun Life Frontline Equity Fund	Birla Sun Life Top 100 Div	Franklin India Bluechip Growth	HDFC Top 200	ICICI Prudential Top 100 Growth	ICICI Prudential Focused Bluechip Equity Growth	L&T India Large Cap Fund	Reliance Top 200 Growth	UTI Equity Growth
Sharpe Index	0.42	0.44	0.29	0.15	0.33	0.37	0.27	0.35	0.45
Treynor Index	6.20	6.57	4.03	1.06	4.61	5.26	3.57	4.88	6.94
Sortino Index	0.69	0.74	0.49	0.24	0.54	0.59	0.43	0.57	0.74

Table 1.3. Rank to Risk-Adjusted Return Performance Index

Fund → Index ↓	Birla Sun Life Frontline Equity Fund	Birla Sun Life Top 100 Div	Franklin India Bluechip Growth	HDFC Top 200	ICICI Prudential Top 100 Growth	ICICI Prudential Focused Bluechip Equity Growth	L&T India Large Cap Fund	Reliance Top 200 Growth	UTI Equity Growth
Sharpe Index	3	2	7	9	6	4	8	5	1
Treynor Index	3	2	7	9	6	4	8	5	1
Sortino Index	3	1	7	9	6	4	8	5	2
Total	9	5	21	27	18	12	24	15	4
Rank	3	2	7	9	6	4	8	5	1

Higher standard deviation means higher risk and lower standard deviation implies lower risk. From this viewpoint, Franklin India Blue-chip growth fund has the lowest standard deviation which means it is less risky in the comparison to the other funds. UTI Equity Growth (15.19) has the next lowest SD, followed by L&T India Large Cap Fund (15.35), ICICI Prudential Focused Bluechip Equity Growth (15.54), Birla Sun Life Top 100 Div (16.63), Reliance Top 200 Growths (17.94) and HDFC Top 200 (19.25) among all funds. If beta value remains less than 1, it indicates that the fund react less than the market reaction. Here HDFC Top 200 and Reliance Top 200 Growths are having 1.12 and 1.03 beta value respectively which is higher than 1. It indicates that the security's price will be more unstable than the market. The rest of the funds are having beta less than 1, which indicates that the security's price will be less volatile than the market.

Risk-Adjusted Return Performance Analysis

WF Sharpe has given Sharpe index in 1966. It measures risk premium of a portfolio, relative to the total amount for risk in the portfolio. Sharpe index summarizes the risk and return of a portfolio in a single measure that categorizes the performance of funds on the risk-adjusted basis. The larger value of the Sharpe Index implies the portfolio over performance the market whereas the lower value indicates its opposite situation. The Treynor's index which is also known as the reward-to-volatility index or Treynor's measure was created by Jack L. Treynor's in 1965. It is a measurement of the returns earned in excess of that which could have been earned on an investment that has no diversifiable risk per each unit

of market risk assumed. The Treynor's index relates excess return over the risk-free rate to the additional risk taken; however, systematic risk is used instead of total risk. The higher value of the Treynor's index indicates the better the performance of the portfolio under analysis. Sharpe and Treynor index assess a money manager's ability to generate excess return per unit of total risk. Where the two indexes differ is in their risk measure. Sharpe's original work focused on total risk, as measured by historical standard deviation of returns, whereas Treynor used systematic or market risk, as measured by the portfolio's beta. However, most investors are only concerned with the downside risk. Several financial measures have been developed that attempt to measure the downside risk of an asset without penalizing an asset or strategy with large positive performance deviations.

One of them is the Sortino index. The Sortino index was created in 1983 by Brian M. Rom at the software development company Investment Technologies. The index is named for Frank A. Sortino, an early popularize of downside risk optimization. It measures the risk-adjusted return of an investment asset, portfolio, or strategy. It is a modification of the Sharpe index but penalizes only those returns falling below a user-specified target or required rate of return, while the Sharpe index penalizes both upside and downside volatility equally. A large Sortino index indicates there is a low probability of a large loss and vice versa. The results of this entire three risk-adjusted return performance Index for selected large-cap mutual funds in India have been mentioned in the following Table no 1.2.

Interpretation

The above Table no. 1.2 indicates that the UTI Equity Growth fund gives highest Sharpe index (0.45) followed by Birla Sun Life Top 100 Div (0.44), Birla Sun Life Frontline Equity Fund (0.42), ICICI Prudential Focused Bluechip Equity Growth (0.37), Reliance Top 200 Growths (0.35), ICICI Prudential Top 100 Growth (0.33), Franklin India Bluechip Growth (0.29), L&T India Large Cap Fund (0.27) and HDFC Top 200 (0.15). Therefore, it can be said that all the selected funds are performing fine as per Sharpe index. UTI Equity Growth has highest Treynor Index (6.94) followed by Birla Sun Life Top 100 Div (6.57), Birla Sun Life Frontline Equity Fund (6.2), ICICI Prudential Focused Bluechip Equity Growth (5.26), Reliance Top 200 Growths (4.88), ICICI Prudential Top 100 Growth (4.61), Franklin India Bluechip Growth (4.03), L&T India Large Cap Fund (3.57) and HDFC Top 200 (1.06). Birla Sun Life Top 100 Div and UTI Equity Growth are having equal Sortino Index (0.74) followed by UTI Equity Growth (0.69), ICICI Prudential Focused Bluechip Equity Growth (0.59), Reliance Top 200 Growths (0.57), ICICI Prudential Top 100 Growth (0.54), Franklin India Bluechip Growth (0.49), L&T India Large Cap Fund (0.43) and HDFC Top 200 (0.24).

Rank to Risk-Adjusted Return Performance Index

The rank is given to the index on the bases of its importance. The total of rank has been considered for the final ranking.

Interpretation

The above table no. 1.3 summarizes the performance of the mutual funds for the past five years according to different measures used. The rankings of the funds are mostly remains same, From the total of average rank, it has been found That UTI Equity Growth at first position (total average rank = 4) followed by Birla Sun Life Top 100 Div (total rank = 5), Birla Sun Life Frontline Equity Fund (total rank = 9), ICICI Prudential Focused Bluechip Equity Growth (total rank = 12), Reliance Top 200 Growths (total rank = 15), ICICI Prudential Top 100 Growth (total rank = 18), Franklin India Bluechip Growth (total rank = 21), L&T India Large Cap Fund (total rank = 24) and HDFC Top 200 (total rank = 18).

Conclusion

It has been concluded that performance of selected large-cap mutual funds in India remains better in comparison than that of the category return. Most of the funds excluding HDFC Top 200 fund are having higher rate of return than category rate of return.

It has been found that ICICI Prudential Focused Bluechip Equity Growth, Birla Sun Life Top 100 Div, Reliance Top 200 Growths and HDFC Top 200 among all funds are having higher standard deviation than the category.

This indicates that these funds are having higher risk than category. It has been also found that HDFC Top 200 and Reliance Top 200 Growths are having 1.12 and 1.03 beta value respectively which is higher than 1. It indicates that these funds react more than the market reaction. From the risk-adjusted performance measurement index, it has been concluded that majority of the funds showed positive returns. In light of Sharpe's performance index, Treynor's performance index and Sortino's performance index, it has been found that UTI Equity Growth secure first position followed by Birla Sun Life Top 100 Div, Birla Sun Life Frontline Equity Fund, ICICI Prudential Focused Bluechip Equity Growth, Reliance Top 200 Growths, ICICI Prudential Top 100 Growth, Franklin India Bluechip Growth, L&T India Large Cap Fund and HDFC Top 200.

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